

Patent Claims

1. Device for correcting defective vision or corneal disease of an eye, characterised by the combination of
 - an instrument (16) for deforming the cornea of the eye with
 - 5 – an instrument (18, 20) for hardening the cornea.
2. Device according to Claim 1, characterised in that the instrument (16) for deforming the cornea comprises a shaped body which can be placed on the eye.
- 10 3. Instrument for hardening a cornea, particularly for use in a device according to Claim 1, having at least one radiation source (20) for irradiated the cornea.
4. Instrument according to Claim 3, characterised in that one or more radiation sources (20) in the instrument are arranged so that the radiation emitted by
- 15 them strikes the cornea homogeneously.
5. Instrument according to one of Claims 3 to 4, characterised in that the instrument is configured so that it can be brought in contact with the cornea for proper use.
- 20 6. Instrument according to one of Claims 3 and 4, characterised in that the instrument is configured so that it lies at a predetermined distance from the cornea for proper use.
- 25 7. Instrument according to one of Claims 3 to 6, characterised in that light-emitting diodes are provided as the radiation source.
8. Instrument according to one of Claims 3 to 6, characterised by a radiation source with optical waveguides (52).

9. Instrument according to one of Claims 3 to 8, having a conical body (18) for guiding the radiation.

10. Instrument according to one of Claims 3 to 9, having a radiation sensor (28) for detecting a part of the radiation emitted by the radiation source or radiation sources.

11. Instrument according to one of Claims 3 to 10, characterised by a control or regulating instrument (24) which can control or regulate the radiation.

12. Instrument according to Claim 6, characterised by an instrument (36, 38) for measuring the distance between a component of the instrument and the cornea.

13. Instrument according to one of Claims 3 to 12, characterised in that the instrument comprises a plurality of radiation sources (20) which are arranged so that their radiation cones (56) allow homogeneous illumination of a cornea by overlapping.

14. Instrument according to one of Claims 3 to 13, having an instrument (22) for driving individual radiation sources.

15. Instrument according to one of Claims 3 to 14, having means for determining properties of the cornea.

16. Operation microscope combined with an instrument according to one of Claims 3 to 15.

17. Device having a surgical laser system for refractive corrections of the cornea, in combination with a device according to one of Claims 1 to 16.